

IN THE DRAWINGS

The attached sheets of replacement drawings include changes to Figures 3, 4, and 5 as described herein. No new matter has been added.

REMARKS

The Office Action dated February 3, 2005 has been carefully reviewed and the foregoing amendment and following remarks have been made in consequence thereof.

Claims 1-27 are pending in this application. Claims 1-11 and 24 are allowed. Claims 12-14 and 27 stand rejected. Claims 15-23, 25, and 26 are objected to.

The objection to the drawings is respectfully traversed. Figures 3 and 4 have been revised to include a legend for item 314 in each figure. Figure 5 has been revised to correct a typographical error. Specifically, " R_h " in the equation has been amended to recite " R_b " and is now consistent with the description in the specification. For the above reasons Applicants respectfully request the objection to the drawings be withdrawn.

The rejection of Claims 12-14, and, 27 under 35 U.S.C. § 103(a) as being unpatentable over Lavoie et al. (U.S. Patent No. 6,798,209) in view of Toya et al. (U.S. Patent No. 4,937,698) is respectfully traversed.

Lavoie et al. describe an injection test signal generator that is incorporated into a circuit breaker such that injection testing can be performed by transmitting test signals generated by internal test signal generator to the circuit breaker trip circuitry. Lavoie et al. describe that the signal (104) from the test signal generator (103) is transmitted to the trip circuitry (102) and that the trip circuitry (102) treats this test signal (104) just like the monitoring signal (106) received from the breaker's sensors so that operation of the trip circuitry (102) can be tested. Lavoie et al. also describes that the monitoring signal or signals (106) that would be received from the sensors (e.g., CTs and PTs) used by the circuit breaker (100) to monitor a power distribution system.

Toya et al. describe a system for foreseeing deterioration in interrupting a performance of a vacuum interrupter, including a first measuring component for measuring potentials of electric lines connected to fixed and movable electrodes of the vacuum interrupter; a second measuring component for measuring a potential of an arc shield; a signal

transmitting section for the transmission of potential signals resulting from the measurements in the first and second measuring component; a comparing section for making a comparison between the measured signal from the first measuring component and the measured signal from the second measuring component both transmitted through the signal transmitting section; and a judging section for judging that the fixed and movable electrodes have been deteriorated in their interrupting performance, on the basis of the result of the comparison made in the comparing section.

Applicant respectfully submits that the Section 103 rejection of the presently pending claims is not a proper rejection. As is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. Neither Lavoie et al. nor Toya et al., considered alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicant respectfully submits that it would not be obvious to one skilled in the art to combine Lavoie et al with Toya et al., because there is no motivation to combine the references suggested in the art. Additionally, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicant's own teaching. Rather, only the conclusory statement that "a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying Lavoie by employing the well known or conventional features of circuit breaker testing, such as disclosed by Toya in order to efficiently detect the potential between the fixed and movable electrodes to judge the contact performance..." suggests combining the disclosures. Moreover, Lavoie et al. do not describe testing the circuit breaker to judge contact performance. Rather, in contrast to Toya et al., Lavoie et al. describe testing the circuit breaker trip circuitry by injecting a signal from an onboard test generator into the circuit breaker trip unit. Applicants respectfully submit that it would not be obvious to ground the load side contact of the circuit breaker and to ground the line-side contact of the circuit breaker while injecting a test signal into the trip unit to test the trip unit circuitry.

Furthermore, Applicants respectfully traverse the assertion in the Office Action that a ground circuit electrically coupled to the load-side contact of the circuit breaker and a ground circuit electrically coupled to the line-side contact of the circuit breaker while supplying a test voltage to a load-side contact and a line-side contact of the circuit breaker is well known in the art, but rather it is counterintuitive to ground the conductors that are receiving a test signal unless the method described in the various embodiments of the present invention is used.

The Office Action has not provided a source for the assertion that a ground circuit electrically coupled to the load-side contact of the circuit breaker and a ground circuit electrically coupled to the line-side contact of the circuit breaker while supplying a test voltage to a load-side contact and a line-side contact of the circuit breaker is well known in the art and that it would have been an obvious modification of the system disclosed by Lavoie, as evidenced by Toya. Applicants respectfully submit that each allegation of what would have been an obvious matter of design choice must always be supported by citation to some reference work recognized as standard in the pertinent art and the Applicants given the opportunity to challenge the correctness of the assertion or the notoriety or repute of the cited reference. Applicants have not been provided with the citation to any reference supporting the assertion made in the rejection. The rejection, therefore, fails to provide the Applicants with a fair opportunity to respond to the rejection, and fails to provide the Applicants with the opportunity to challenge the correctness of the rejection. Moreover, Applicants respectfully traverse the assertion in the Office Action that Toya et al. disclose a ground circuit electrically coupled to the load-side contact of the circuit breaker and a ground circuit electrically coupled to the line-side contact of the circuit breaker. Applicants respectfully submit that Toya instead disclose voltage dividers for generating potential signals.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art,

and not based on Applicant's disclosure. In re Vaeck , 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention.

Moreover, if art "teaches away" from a claimed invention, such a teaching supports the nonobviousness of the invention. *U.S. v. Adams*, 148 USPQ 479 (1966); *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d 1923, 1927 (Fed. Cir. 1990). In light of this standard, it is respectfully submitted that the cited, as a whole, is not suggestive of the presently claimed invention. Moreover, Applicant submits that Lavoie et al. teach away from Toya et al. and the present invention, and as such, there is no suggestion or motivation to combine Lavoie et al. with Toya et al. Specifically, Lavoie et al. describe transmitting test signals generated by an internal test signal generator to the circuit breaker trip circuitry wherein the signal from the test signal generator is transmitted to the trip circuitry and that the trip circuitry treats this test signal just like the monitoring signal that is received from the breaker's sensors so that operation of the trip circuitry can be tested and Toya et al. describe measuring potentials of electric lines connected to fixed and movable electrodes and an arc shield of the vacuum interrupter and to determine if the fixed and movable electrodes have been deteriorated in their interrupting performance. Accordingly, for at least the reasons set forth above, Applicant respectfully requests that the Section 103 rejection be withdrawn.

Moreover, and to the extent understood, neither Lavoie et al., nor Toya et al. describes or suggests the claimed combination and as such, the presently pending claims are patentably distinguishable from the cited combination. Specifically, Independent Claim 12 recites a circuit breaker test device for analyzing contacts of a circuit breaker wherein the test device includes “a test voltage source configured to supply a test voltage to a load-side contact and a line-side contact of the circuit breaker...a sensing circuit coupled to said test voltage source, said sensing circuit configured to monitor an output of said test voltage source...a microprocessor coupled to an output of said sensing circuit, said microprocessor configured to receive the output of said sensing circuit...a ground circuit electrically coupled to the load-side contact of the circuit breaker...a ground circuit electrically coupled to the line-side contact of the circuit breaker.”

Neither Lavoie et al. nor Toya et al. describe or suggest the claimed combination. Specifically, Applicants respectfully submit that no combination of Lavoie et al. and Toya et al. alone or in combination, describe or suggest a test voltage source configured to supply a test voltage to a load-side contact and a line-side contact of the circuit breaker. Rather, in contrast to the present invention, Lavoie et al. describe transmitting test signals generated by an internal test signal generator to the circuit breaker trip circuitry to test the trip unit and Toya et al. describe monitoring potentials on a fixed and movable electrodes and an arc shield of the vacuum interrupter to determine if the fixed and movable electrodes have been deteriorated in their interrupting performance. Furthermore, neither Lavoie et al. nor Toya et al., considered alone or in combination, describes or suggests a ground circuit electrically coupled to the load-side contact of the circuit breaker and a ground circuit electrically coupled to the line-side contact of the circuit breaker. Rather, in contrast to the present invention, Lavoie et al. describe injecting test signals generated by an internal test signal generator into the circuit breaker trip circuitry to test the trip unit and Toya et al. describe measuring potentials of electric lines connected to fixed and movable electrodes and an arc shield using voltage dividers, but neither Lavoie et al. nor Toya et al. describe or suggest a ground circuit electrically coupled to the load-side contact of the circuit breaker and a ground circuit electrically coupled to the line-side contact of the circuit breaker. Accordingly, and

for at least the reasons set forth above, Claim 12 is submitted as patentable over Lavoie et al. in view of Toya et al.

Claims 13, 14, and 27 depend from independent Claim 12. When the recitations of Claims 13, 14, and 27 are considered in combination with the recitations of Claim 12, Applicants respectfully submit that Claims 13, 14, and 27 likewise are patentable over Lavoie et al. in view of Toya et al.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 12-14, and 27 be withdrawn.

Claims 15-23, 25, and 26 were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 15-23 depend from independent Claim 12 which is submitted to be in condition for allowance. When the recitations from Claims 15-23 are considered in combination with the recitations of Claim 12, Applicants submit that Claims 15-23 likewise are patentable over Lavoie et al. in view of Toya et al.

Claim 25 depends from independent Claim 1, which was indicated in the Office Action to be allowed. When the recitations from Claim 25 are considered in combination with the recitations of Claim 1, Applicants submit that Claim 25 likewise is in condition for allowance.

Claim 26 depends from independent Claim 10, which was indicated in the Office Action to be allowed. When the recitations from Claim 26 are considered in combination with the recitations of Claim 10, Applicants submit that Claim 26 likewise is in condition for allowance.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully Submitted,



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